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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,127	03/08/2001	Eric A. Loth	GLN-004US	4963

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VAN TASSEL AND ASSOCIATES
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EXAMINER

GOODWIN, JEANNE M

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/743,127

Applicant(s)

LOTH ET AL.

Examiner

Jeanne-Marguerite Goodwin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 27, 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the dial (32) and the ring (44) each bear a scale defining a vernier must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "33" has been used to designate both a circular scale and a window. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

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- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In this case, proper headings should be added to the disclosure.

- 4. The disclosure is objected to because of the following informalities:
 - a. In the specification, page 6, line 5: the letters "GM" should be define to better describe the invention, furthermore the appropriate acronym is GMT;
 - b. In the specification, page 6, line 13; page 8, line 23: reference number "47" should be labeled --index mark-- for consistency purposes;
 - c. In the specification, page 6, line 18: reference number "33" should be labeled --window-- for consistency purposes;
 - d. In the specification, page 8, line 23; page 9, lines 6, 13, 21; and page 10, line 4:

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--rotating-- should be added before "ring 44" for consistency purposes;

e. In the specification, page 9, line 18: "bezel 44" should be replaced by --rotating ring 44-- for consistency purposes;

f. In the specification, page 9, lines 19 and 23: the reference "scale 33" should be carefully viewed and changed to properly describe the invention;

g. In the specification, page 9, line 21: "t" after "date should be deleted for grammatical purposes; and

h. In the specification, page 9, line 22: the reference "scale 44" should be carefully viewed and changed to properly describe the invention.

Appropriate correction is required.

Claim Objections

5. Claim 9 is objected to because of the following informalities: In claim 9, line 2: "said ring (34)" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: between the display surface (54), the index (48), the reading scale

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(52) as stated in claim 4 and the wheel (16), the dial (32), the hour hand (24), the minute hand (28) as stated in claim 1. Perhaps, the case (10) and back cover (40) should be claimed in either claim 1 or claim 4 for complete structural cooperative relationship of the elements stated above.

Claims 5-7 are rejected to as being dependent upon a rejected claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 428,588 to Barrett [hereinafter Barrett].

Barrett discloses timepiece intended for defining a location longitude, including an hour-dial (B) having an hour hand, a minute-dial (B') having a minute hand, a fixed circular disk/ring (A), wherein the disk/ring (A) is divided into an inner circle (d) and an outer circle (b), the inner circle being graduated with the number of degrees corresponding with the number of hours which are to be indicated upon the dial of the timepiece. If twenty-four hours are indicated upon this dial, the disk may be graduated to three hundred and sixty degrees. If but twelve hours are indicated upon the dial, the disk will be graduated to one hundred and eighty degrees. The outer circle is divided into divisions of longitude corresponding to the number of minutes of time, whereby each indicated minute on the dial indicates fifteen miles of longitude. For nautical

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purposes, the timepiece is set to Greenwich or standard time. If it is desired to know the actual time in any given longitude, it is only necessary to know the longitude of the place where the time is desired and then by turning the dials (B/B') (which move independently of the meridian disk and hands) until the zero, which upon the dial is the 12-o'clock mark, is brought opposite the longitude of the place designated, the hands of the timepiece will immediately show upon the dial in its new position the actual time of this place. For example, in going to the west from any given point the dial will be turned to the right with reference to the meridian circle, and in going to the eastward the dial will be correspondingly turned to the left. Furthermore, the disk/ring (A) encircles the dials (B/B') and the hour hand is extended by an arrow-type up to the vicinity of the disk/ring (A), which is of greater length than the minute hand. Barrett discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 1, i.e., the ring being rotatable; the limitation stated in claim 8, i.e., a vernier scale to improve the equation of time adjustment precision; and the limitation stated in claim 9, i.e., a vernier scale to improve longitude reading precision.

With respect to the limitation stated in claim 1: Barrett already discloses the use of a disk/ring, whereby inner circle is graduated by one hundred and eighty degrees and an outer circle divided into division of longitude corresponding to the number of minutes of time, whereby each indicated minute on the dial indicates fifteen miles of longitude. Furthermore, it is very well known in the art that a disk may be rotatable, respectively. Therefore, the use of the rotatable ring/disk as claimed by applicant, absent any criticality, is only considered to be a choice of engineering skill, choice of design because 1) neither non-obvious nor unexpected results will be obtained if a the ring/disk is rotatable or fixed as already suggested by Barrett, 2)

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the ring/disk claimed by applicant and the disk/ring used by Barrette are well known alternate types of ring/disk structures which will perform the same function, if one is replaced with the other, of indicating the hours and minutes of longitude, and 3) the use of the ring/disk by applicant is considered to be nothing more than the use of one of numerous and well known alternate types of ring/disk structures that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to indicate the hours and minutes of longitude.

With respect to the limitation stated in claims 8 and 9: Official Notice is taken with respect to the use a vernier scale since it is very well known in the timepiece art to use a vernier scale in order to provide for a more precise indication of time adjustment and longitude reading. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add vernier scale, respectively, as taught by applicant, to the device of Barrett, in order to provide for a more precise indication of time adjustment and longitude reading.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett in view of US Patent 6,134,186 to Jang [hereinafter Jang].

Barrett discloses a device as stated in regards to claims 1, 3, 8 and 9. Barrett discloses all subject matter claimed by applicant with the exception of the limitation stated in claim 2, i.e., a time zone bearing a graduation going from 0 to +6 hours or -6 hours.

With respect to the limitation stated in claim 2: Jang discloses in Fig. 3, a disk marked with a plurality of time difference values (40) going from +1 to +4 hours or -16 hours in order to be able to determine the time difference in other countries, respectively. With respect to the

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particular values of the graduations, this limitation in the claim, absent any criticality, is only considered to be the “optimum” value of the time difference between the foreign countries disclosed by Jang, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, desired accuracy, etc. See *In re Boesch*, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the time difference values, as taught by Jang, to the disk/ring of Barrett, in order to be able to determine the time differences between foreign countries more efficiently.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett in view of US Patent 5,253,225 to Vaucher [hereinafter Vaucher].

Barrett discloses a device as stated in regards to claims 1, 3, 8 and 9. Barrett discloses all subject matter claimed by applicant with the exception of the limitation stated in claim 10, i.e., a disk completing one revolution in 24 hours, in synchronism with the hour hand and bearing data relative to the cardinal points.

With respect to the limitation stated in claim 10: Vaucher discloses a watch comprising a dial (6) and at least one time indicating element (4) kinematically driven in rotation by a mechanical or electromechanical horometric movement, wherein it effects a complete revolution every twenty-four hours, and particularly intended to be pointed towards the sun, and direction indicating means (N, S, W, E) arranged on said watch enabling one to know, as a function of the orientation of said indicating means (4) and the direction of at least one of the cardinal points. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the

invention was made to add the dial and indicating element assembly, as taught by Vaucher, to the device of Barrett, in order to enable one to know, as a function of the orientation of said indicating means and the direction of at least one of the cardinal points.

Allowable Subject Matter

12. Claims 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claim 4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

14. Claims 5-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

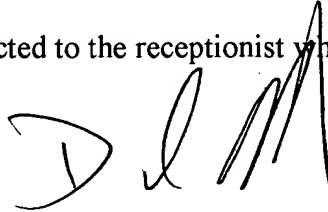
Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 disclose related devices. US Patent 4,681,460 to Nishimura and US Patent 434,137 to Plechawski disclose geographical time indicators; US Patent 4,032,754 to Ageton discloses a global time system; US Patent 5,982,710 to Rawat et al. discloses a device for providing time using Cartesian coordinates; US Patent 2,032,462 to Bean

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discloses a solar compass watch; and US Patent 4,487,511 to Lucarelli discloses a watch for the space orientation (compass) in addition to the time orientation.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Jeanne-Marguerite Goodwin whose telephone number is (703) 305-0264. The examiner can normally be reached on Monday-Friday (9am-6pm), alternate Fridays off. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'D L M', is positioned above the printed name of the examiner.

JMG
Feb. 6, 2003

DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800